

REMARKS

The Office Action mailed August 14, 2008 has been carefully considered. Reconsideration in view of the following remarks is respectfully requested.

Rejection(s) Under 35 U.S.C. §§102 and 103

Claims 1-9 stand rejected under 35 U.S.C. §102(e) as allegedly being anticipated by Prince (U.S. pat. no. 6,743,021). Claims 10-12, 14 and 16 stand rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over Prince. Claims 13, 15 and 17 stand rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over Prince in view of Martin.

Applicants respectfully traverse.

Prince discloses a Braille display system comprising a tactile interface formed by a plate having a surface capable of being modified in a controlled manner (col. 1, ll. 24-26). The system of FIGS. 9A and 9B of Prince includes said plate, which can be deformed by a plurality of discrete micromechanical devices 16 (col. 11, ll. 18-21) having shape memory elements 282. These constitute modification elements of the surface plate. However, these modification elements of the surface of the plate are distinct from the plate are not composed of one or more blades, or composed of one or more arms that are solid monolithically with the plate. Further, the plate is not made of shape memory alloy. Indeed, the device uses thin film shape memory alloy, but in the discrete MEMS devices and not for a structure integrated as a plate.

Furthermore, the embodiment illustrated in FIGS. 10A and 10B of Prince comprises said plate which is formed by a polymer layer 20 covering a modification element of the surface integrally joined to this. This modification is a thin film made of a shape memory alloy (col. 12, ll. 39-42). However, the modification element of the surface in the FIG. 10A and 10B embodiment is not composed of an assembly of one or more blades solid monolithically with the plate by one or more arms solid monolithically with the plate, recesses for releasing blades being present on a part of a perimeter of the blade. Indeed, it is composed of a single thin film with a constant thickness.

In addition, the other embodiments disclosed in Prince (that is, FIGS. 6-8 and 11) do not include modification elements of the surface of the plate integrated in said plate, but rather include discrete MEMS actuators that are distinct from the plate. Further, the plate is not made of a memory shape alloy.

Prince describes, in the embodiment of FIGS. 9A and 9B, biasing means 283 mechanically connected first to the plate and second to the modification element of the surface of the plate. These biasing means are part of the modification element. They apply a restoring force on the modification element to urge it back from the second position to the first position (col. 12, ll. 20-25). As a variant of these biasing means, Prince discloses the use of a second shape memory element to provide the restoring force (col. 12, ll. 33-35). However, no more details are described. Thus, this disclosure is not sufficient to enable one of ordinary skill in the art to realize this embodiment.

Further, Prince does not disclose elements made of two-way shape memory alloy having a first hot form and a second cold form. Rather, in Prince, a second element is necessary to get the first element back in the initial form, such as an elastic means that exerts a restoring force (col. 12, ll. 1-5 and ll. 25-32), or such as a second element made of shape memory alloy (col. 12, ll. 33-35).

In addition, Prince neither discloses nor suggests the use of a laser emitter whose radiation allows obtaining the change of the shape memory element for modification of the surface of the plate. Martin discloses the use of a laser diode to obtain the change of position of a bimetallic flap (col. 5, ll. 52-62). However, one of ordinary skill in the art would not be motivated to combine the teachings of Prince and Martin since the discrete MEMS actuator comprises a base 26 and a frame 24 which could interact with the laser radiation and thus perturb the change of the shape memory element.

In view of the above, applicants respectfully submit that the subject matter of claim 1, and the remaining claims dependent therefrom, is neither disclosed nor suggested by Prince or Martin, considered singularly or in combination.

Conclusion

In view of the preceding discussion, Applicants respectfully urge that the claims of the present application define patentable subject matter and should be passed to allowance.

If the Examiner believes that a telephone call would help advance prosecution of the present invention, the Examiner is kindly invited to call the undersigned attorney at the number below.

Please charge any additional required fees, including those necessary to obtain extensions of time to render timely the filing of the instant Amendment and/or Reply to Office Action, or credit any overpayment not otherwise credited, to our deposit account no. 50-3557.

Respectfully submitted,
NIXON PEABODY

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